

## Cannabis Research Center Annual Report

July 2024 - June 2025

The University of Minnesota School of Public Health Cannabis Research Center was established in 2023, shortly after Minnesota legalized the use of cannabis for individuals age 21 and older.

### CRC MISSION: SERVICE TO THE STATE

The University of Minnesota School of Public Health Cannabis Research Center (CRC) strives to understand the health implications of cannabis and be a **trusted source of information to guide policy and practice related to cannabis use.**

To accomplish this, the CRC:

- **Conducts timely and Minnesota-specific research** on both the positive and negative health effects of cannabis.
- **Studies issues pertaining to equity** in cannabis production, sales, marketing, decriminalization, and use.
- **Provides interpretation and contextualization** of research findings.
- **Collaborates** with state and local agencies, policymakers, and community members to ensure information is **responsive to needs and accessible to all Minnesotans.**
- **Trains and supports future practitioners and scholars** to engage in research related to cannabis policy and its effects on health and health equity.

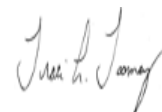


### A NOTE FROM THE CRC DIRECTOR

**Traci L. Toomey, PhD**

This has been another amazing year with the Cannabis Research Center.

We have developed an incredible core team of researchers to conduct a wide range of research projects that can be used to improve the health of Minnesotans. We have also funded other research projects, drawing upon the broad expertise available at the University of Minnesota. We continue to deepen and expand collaborations with local and state agencies and organizations. The CRC is developing new data sources and working with state agencies to improve those that already exist. We are learning about what cannabis products Minnesotans are using and in what context they are using them. We are helping to identify the training needs of people and organizations involved in implementing cannabis legalization in Minnesota. And we are beginning to assess the effects of cannabis and cannabis legalization on different populations in Minnesota. The CRC team is grateful for the continued appropriation from the Minnesota state legislature. We look forward to continuing to serve our state, providing research to inform policy and practice related to cannabis legalization.



# ANNUAL REVIEW & ACCOMPLISHMENTS

## JULY 1, 2024 - JUNE 30, 2025



### NUMBERS AT A GLANCE

**19** research projects  
**33** presentations and panels  
**10** interviews and articles  
**8** research briefs  
**491+** engaged followers

### SUMMARY

The period spanning July 2024 to June 2025 was the second year of operation of the Cannabis Research Center (CRC), a time of transition from building infrastructure to solidifying the CRC's value to the state as a trusted source of information related to cannabis use and legalization in Minnesota. This year included major changes in the cannabis landscape in Minnesota, including the Office of Cannabis Management finalizing regulations for cannabis retailers and issuing the state's first adult-use cannabis business licenses outside of tribal land. This progress happened alongside state and local agencies and organizations striving to understand the changes in cannabis laws and their role in responding to these changes. The CRC engaged in new and sustained research efforts, publications and partnerships. The CRC also expanded collaborations with many people and organizations throughout the state, hosting its first webinar attended by over 200 participants and serving as a resource during the Minnesota legislative session.

### CRC RESEARCH

The CRC conducts timely and Minnesota-centered research on both potential positive and negative health effects of cannabis. This year, the CRC portfolio grew to 19 research projects.

Highlights from CRC research efforts include:

- A statewide survey of school support staff to identify needs related to cannabis legalization in Minnesota.
- An ongoing study of cannabis knowledge, attitudes, perceptions and use among Minnesota State Fair and county fair attendees.

- A secondary data analysis of the College Student Health Survey (CSHS). This effort included adding three new questions to an existing CSHS to assess frequency of cannabis use and association with consequences among college students, allowing CRC researchers to analyze trends over time.
- Analysis of 15 years of cannabis use data from the National Survey on Drug Use and Health. In order to conduct these analyses, four CRC researchers undertook a complex application process to gain access to the Minnesota Research Data Center (MnRDC), a secured setting restricted to those with Special Sworn Status.
- Focus groups with American Indian and African American populations to understand the impact of cannabis legalization on these communities.
- Intercept surveys on the UMN campus, and at public libraries, farmers markets and other local events to assess a range of terms used for cannabis and whether these terms vary across age group and race/ethnicity.
- The second phase of pseudo-underage purchase attempts (young-looking people attempt to purchase hemp-derived cannabis products without showing age identification), expanding from Minneapolis to the broader Twin Cities metropolitan area.
- Development of a novel conceptual model showing how underage youth may obtain cannabis.
- An interactive data mapping tool to provide county-level estimates for the prevalence of cannabis use among 9th and 11th graders throughout Minnesota. Through this tool, the CRC is providing interpretation, contextualization and visualization of data to make it more accessible and useful to Minnesotans.
- A new Geographical Information System (GIS) mapping study of hemp business locations and density across Minnesota.

## RESEARCH HIGHLIGHT: SELF-REPORTED CANNABIS USE PATTERNS AMONG MINNESOTA STATE FAIRGOERS

Using a survey conducted by the Cannabis Research Center at the 2024 Minnesota State Fair, this research examines data on Minnesota adults' self-reported use of cannabis, including the types of products used, how often the products were used, and where the products were obtained.

### Notable findings:

- Edible and beverage cannabis products were the most commonly used by respondents.
- Among people who reported using edibles, almost half (46%) reported using them just once to a few times per year, and only 1 in 10 reported using them once or multiple times per day.
- Among people who reported using THC beverages, 6 in 10 reported using them just once to a few times per year, and less than 1 in 10 respondents (2%) reported using them once or multiple times per day.
- Edibles and beverages were most commonly obtained from commercial sources (e.g., stores), while flower and other smoked and vaped products were more commonly obtained from social sources (e.g., friends).

The purpose of the survey was to examine a variety of issues related to cannabis in an evolving policy landscape, in part to help policymakers understand the potential public health implications and to inform evidence-based cannabis policy.

[Read the research brief: Self-reported Cannabis Use Patterns Among Minnesota State Fairgoers](#)

## EXTERNAL PROJECTS FUNDED BY CRC

In addition to the projects listed above, the CRC awarded approximately \$180,000 for projects conducted by University of Minnesota faculty and students outside the CRC. Research projects funded by the CRC are selected by a competitive grant process and serve to expand the expertise and knowledge generated by the CRC. In the 2024-2025 funding cycle, researchers represented diverse areas of study including health services, policy and administration, medicine, environmental health, pharmacology, plant and microbial biology,

public affairs, economics, business and behavioral health. The CRC funded three faculty-led and three student-led projects, including:

### JULY 2024 - JULY 2025

- A Qualitative Study of Cannabis Use Among Transgender and Gender Diverse People Across the Cancer Care Continuum
- Systematic Literature Review on the Genotoxic, Mutagenic, and Carcinogenic Mechanisms and Effects of Cannabis

### NOVEMBER 2024 - NOVEMBER 2025

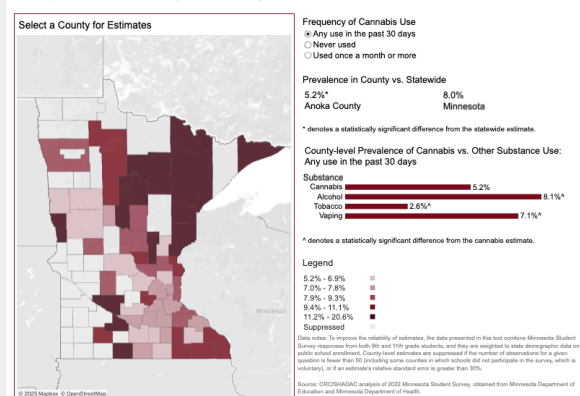
- Analytical Testing Protocols for Minnesota Recreational Cannabis
- Racial Differences in Cannabis Business Ownership and the Economic Effects of Minnesota's Cannabis-Related Legislation
- A Retrospective Analysis of Cannabis Use Prevalence in Individuals Prescribed Metformin
- Associations between Cannabis Use and Student Health: Minnesota Student Survey 2022

With each new project, the CRC strives to answer the most important questions related to cannabis and public health. For a complete list of ongoing CRC research projects visit:

[z.umn.edu/CRC-CurrentStudies](https://z.umn.edu/CRC-CurrentStudies).

## RESEARCH HIGHLIGHT: INTERACTIVE DATA MAPPING TOOL

Self-reported Cannabis Use by Minnesota High School Students, 2022



A new CRC interactive mapping tool provides county-level estimates for the prevalence of cannabis use among 9th and 11th graders throughout Minnesota. Access the tool: [z.umn.edu/CRC-MappingTool](https://z.umn.edu/CRC-MappingTool)

## COLLABORATION HIGHLIGHT: IDENTIFYING THE CANNABIS PREVENTION AND EDUCATION NEEDS OF MINNESOTA SCHOOLS

Legislation mandates that Minnesota school districts and charter schools implement a comprehensive cannabis and substance use education program for middle and high school students by the 2026-2027 school year. The CRC collaborated with the Minnesota Department of Education (MDE) to conduct a statewide survey of Minnesota school support staff to identify their needs related to cannabis legalization.

### Notable Findings:

Among 296 support staff working in Minnesota schools who completed the survey:

- Most (68%) reported dealing with student cannabis use in the last year.
- About one half (51%) reported dealing with students experiencing health problems related to cannabis in the last year. The most common cannabis-related health problem among students was anxiety after using cannabis.
- Very few (8%) reported knowing about the forthcoming legal requirements for schools to provide cannabis education.

The results from this survey are informing the work of the Healthy & Supportive Schools (HSS) team at MDE. The HSS team is developing best practice guidance and protocols for the school's response to student cannabis use. Further, the survey has provided MDE with the training needs of school staff for identification of cannabis products, identification of students under the influence, referral protocols within the school, and pathways to care. The CRC also shared results of this study as a research brief and public webinar, which drew 327 registrants and 211 live attendees.

*"MDE is so grateful for the expertise that was provided by the Cannabis Research Center. This project will be instrumental in assisting MDE to provide chemical health related guidance to schools prior to the 26/27 school year."*

*-Lisa Hoogheem, MDE*

Read the research brief: [Identifying the Cannabis Prevention and Education Needs of Minnesota Schools](#)

## COLLABORATIONS AND PARTNERSHIPS

The CRC collaborated with partners across Minnesota in the 2024-2025 year including the Minnesota Department of Education, Minnesota Department of Health and Office of Cannabis Management. These collaborations highlight how public resources invested in the CRC translate into measurable benefits for Minnesota communities by putting research into action.

## EQUITY AND ENGAGEMENT

Equity and engagement are among the core values that define the work of the CRC. The CRC team engaged in community outreach to understand the impact of cannabis legalization on American Indian and African American communities, including 9 focus groups with a total of 56 participants, as well as 15 in-depth one-on-one interviews with community leaders representing sectors such as criminal justice, youth groups, education, religious institutions, local government, and native community centers. CRC team members also attended two community events at local organizations and tabled at local community centers. Additionally, the Equity and Engagement team led a scoping literature review examining the policy implications of cannabis legalization on social and health equity. This project is nearing completion.

In the coming year, the CRC will focus on developing a stronger presence among Minnesota communities, with a focus on: (1) disseminating findings from the scoping review, interviews and focus groups, (2) hosting community talk-back events to share results and gather feedback on how to genuinely center Minnesota communities in non-extractive ways, (3) tabling at large community events to disseminate information about the public health implications of the legislation, especially in communities most adversely affected by the "War on Drugs", and (4) piloting one or two additional initiatives for cannabis equity and CRC community engagement. Upcoming areas of interest based on focus group findings for the Equity and Engagement team include a) underage access and use, b) implications of cannabis legalization on the publicly housed and housing instability; c) barriers to community and economic development (e.g., entry into legal cannabis retail, density and locations of cannabis dispensaries), and law



enforcement practices related to arrests for cannabis use. The Engagement and Equity team works collaboratively across CRC teams (e.g., Research, Communications, Operations) to accomplish its goals.

## RESEARCH DISSEMINATION

The CRC strives to be a trusted source of information to guide policy and practice related to cannabis use in Minnesota. Through the CRC website, LinkedIn profile, a public webinar, media interviews and presentations, CRC research was made available to lawmakers, the scientific community and Minnesotans. This year, the CRC website surpassed 12,000 views with 1000+ file downloads of research briefs or reports. The CRC LinkedIn presence grew from zero to 492 followers representing professionals in higher education, government administration, healthcare, public health, non-profits, research, public policy, mental health care, business consulting and more who are now tapped in to receive updates on CRC research and events. CRC researchers appeared in ten media interviews or articles and engaged in 33 presentations or panels.

### 2024-2025 CRC RESEARCH BRIEFS:

[Cannabis Use and Perceptions Among Minnesota High School Students](#)

[An Assessment of Needs of Local Public Health Agencies Related to Legalization of Cannabis in Minnesota](#)

[Review Of Literature Assessing Effects of the Location and Density of Retail Cannabis Outlets](#)

[Summary of School-Based Education Programs](#)

[Likelihood of Illegal Cannabis Sales to Underage Buyers in Minnesota](#)

[Cannabis Use Across the States in the Early Legalization Era](#)

[Identifying the Cannabis Prevention and Education Needs of Minnesota Schools](#)

[How Underage Youth May Obtain Cannabis: A Conceptual Model](#)

## POLICY AND FUNDING UPDATE

We are happy to report that continued funding for the Cannabis Research Center was included in the

final Minnesota Higher Education bill signed by Governor Tim Walz in June 2025. This funding update came after a legislative session where tight budgets caused cuts in funding to research and public health efforts across the state. During the session, ten letters of support were submitted to the legislature from individuals and organizations speaking to the value the CRC provides Minnesota. Letter writers included the Minnesota Prevention Alliance, NAMI Minnesota, Smart Approaches to Marijuana, the City of Minneapolis and the Tobacco Free Alliance. We are grateful to these individuals and organizations for their support.

### STATEMENTS OF SUPPORT FOR THE CRC:

*"The research center is important for both prevention and intervention. The truth is that our mental health system is not fully built yet, and as young people will have more access to cannabis in our state, we owe it to them to use and provide scientifically verified information on the real potential impacts of cannabis use."*

-Executive Director, NAMI Minnesota

*"The CRC's research is foundational to our tobacco prevention work, especially as nicotine and cannabis use are increasingly interlinked. Dual use is common among youth, and understanding how cannabis legalization influences this trend is vital to designing effective prevention strategies."*

-Executive Director, Tobacco-Free Alliance

*"The Minneapolis Health Department relies on the UMN Cannabis Research Center (CRC) to provide data and research about the public health implications of cannabis legalization for recreational use. Given that cannabis is not legal for use at the federal level, there is very little research on the health implications of cannabis use. The CRC provides a trusted source of this crucial information."*

-Deputy Commissioner of Health, Minneapolis

*"[The CRC] is essential for ensuring that Minnesota has accurate, science-based data to understand the short- and long-term impacts of cannabis use, particularly as it relates to public health, youth prevention, education, and mental health. As someone engaged in youth and family services and prevention work, I believe this research will help shape smarter, more effective*

*policies that protect young people while also supporting public education efforts statewide.”*  
-Program Coordinator, Minnesota Prevention Alliance Coalition

*“[The City of Minneapolis] used the CRC’s study on youth access to low potency hemp THC products in Minneapolis. This research found that pseudo-underage buyers (buyers who were over 21 but looked younger) were able to purchase hemp-derived THC products in over 55% of the purchase attempts in Minneapolis. IDs were not requested by the establishments that sold. This study highlights the need for instituting effective education and a strong compliance check program in our City.”*  
-Deputy Commissioner of Health, Minneapolis

## TRAINING AND TEAM UPDATE

The CRC’s mission includes training future practitioners and scholars to engage in research related to cannabis policy and its effects on health and health equity. This year, the CRC supported five graduate research assistants and one undergraduate project assistant. One CRC research assistant completed her PhD focused on cannabis and joined the CRC team as a full-time Research Associate. Four research assistants completed MPH degrees, with one beginning her PhD and staying with the CRC team.



CRC team members at a community event to share information and collect data on public perceptions of cannabis legalization in MN.

## A SPECIAL THANK YOU TO THE CRC 2024-2025 GRADUATE RESEARCH ASSISTANTS AND PROGRAM ASSISTANT:

- Eileen Delehanty, PhD, MPH
- Diana Augustin, MPH
- Najma Dahir, MPH
- Kenzie Granger, MPH
- Ivy Norman, MPH
- Hannah Rehrauer, BA

## LOOKING AHEAD

As we move into the third year of operation of the CRC, we look forward to launching a new and exciting longitudinal cohort study to understand and describe cannabis use among University of Minnesota students throughout their student career. Next year the CRC pseudo- underage purchase attempts study will begin a third phase and expand to greater Minnesota. Additionally, the CRC plans to support the development and evaluation of a tool to assess ingestion of delta-9-tetrahydrocannabinol (THC) and cannabidiol (CBD) from foods and beverages and begin one or more qualitative studies that could include interviews with law enforcement professionals, substance use counselors, and/or healthcare professionals. As the cannabis landscape in our state continues to evolve, so will CRC efforts to conduct timely research on both the positive and negative health effects of cannabis.

## ACKNOWLEDGEMENTS

We thank the Minnesota state legislature for designated funds to sustain the important work of the CRC and the School of Public Health staff and leadership who support this center.

## CRC Leadership



<b>Traci Toomey, PhD</b> Director	<b>Darin Erickson, PhD</b> Associate Director of Research	<b>Rhonda Jones-Webb, DrPH</b> Associate Director of Equity & Engagement	<b>Julie Sanem, PhD</b> Research Center Manager	<b>Kath Lenk, MPH</b> Senior Research Scientist
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